RMT

Technical Memorandum

Date: November 14, 2007

To: Sam Chummar - United States Environmental Protection Agency (USEPA)

cc: Jennifer Hale - Weyerhaeuser

From: Jim Hutchens - RMT

Project No.: 5130.04

Subject: Turbidity Monitoring – Plainwell Mill Emergency Action

Sam:

As we discussed on site last week, the following is a proposed modification to the turbidity level exceedance criteria for the Plainwell Mill Banks Emergency Action project. Please recall that the proposed modification was also integrated into the Powerhouse channel removal activities with the agreement of the EPA and MDEQ but that this field change was not implemented until after submittal of the design report for the Mill Bank Emergency Action and thus was not integrated into the original submittal.

Based on the design report, the water quality control performance criterion to trigger corrective responses was a consistently visible plume or reproducible turbidity readings at the downstream station that were 2 times the background water quality. Historical readings taken earlier in the year along the Plainwell mill indicated turbidity levels of 16 to 18 NTUs. However, background readings taken over the past week (November 1-November 9) identified turbidity levels of 1 to 4 NTUs.

With the background level being so low, corrective action levels of 2 times may be impracticable to address. Thus, we are requesting a variance on the action level to a either 2 times the background level or a minimum of 15 NTU.

A reproducible exceedence at the downstream monitoring station of either the 2 times background or 15 NTU will trigger the following actions to identify and eliminate the cause of the exceedence:

1. Inspection of the area downstream of the excavation site to determine whether distinct sediment plumes or other characteristics that may indicate the cause of increased turbidity are visible.
    - If a sediment plume is visible, its point of origin will be identified through an inspection of the resuspension control system.
    - In the event the resuspension control system is not functioning correctly or is damaged, removal activities will be suspended until any necessary repairs or adjustments have been completed.

2. If no suspended sediment plume is visible, the turbidity meter will be inspected for damage, malfunction, improper calibration, or other localized condition that may cause or mimic an elevated turbidity reading.
   - If calibration of the meter does not solve the problem, a replacement unit will be used until the original unit has been repaired.
   - If the meter is functioning properly, the resuspension control system will be re-inspected, and any necessary repairs or modifications will be implemented.
3. The rate and/or method of removal activities will be adjusted if it is determined that the Action Level exceedance is a result of work activities and the resuspension control system appears to be functional based on inspection.
4. If the rate adjustment is unsuccessful at lowering turbidity to below the action level, removal activities will be suspended until acceptable turbidity levels have been achieved. Removal activities may be resumed (at previous rates) once turbidity readings have been below the action level for 30 minutes, provided that mitigation measures have been completed and unacceptable turbidity levels have not occurred.